

Applicants: Philip O. Livingston and Friedhelm Hellriegel
Serial No.: 08/196,154
Filed: November 16, 1995

FOR DISCUSSION PURPOSES ONLY- DO NOT ENTER

In the Claims:

Please amend claims 97, 111, and 113 as follows:

--97. (3x amended) A composition which comprises:

a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising [a] an altered sphingosine base comprising a C-4 carbon; to ii) Keyhole Limpet Hemocyanin, comprising an ϵ -aminolysyl group;

b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and

c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,

wherein in the conjugate the ganglioside derivative is covalently bound to Keyhole Limpet Hemocyanin by a stable amine bond between the [through a] C-4 carbon of the altered sphingosine base of the altered ceramide portion of the ganglioside derivative [to] and the nitrogen of the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin [wherein the C-4 carbon is present in a CH_2 group].--

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--111. (3x amended) A method of stimulating or enhancing antibody production in a subject which comprises administering to the subject an effective amount of a composition which comprises:

- a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising [a] an altered sphingosine base comprising a C-4 carbon, to ii) Keyhole Limpet Hemocyanin comprising an ϵ -aminolysyl group;
- b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and
- c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,

wherein in the conjugate the ganglioside derivative is covalently bound to Keyhole Limpet Hemocyanin by a stable amine bond between the [through a] C-4 carbon of the altered sphingosine base of the altered ceramide portion of the ganglioside derivative [to] and the nitrogen of the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin [, wherein the C-4 carbon is present in a CH_2 group], so as to thereby stimulate or enhance antibody production in the subject.--

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--113. (3x amended) A method of treating a cancer in a subject which comprises administering to the subject an effective cancer treating amount of a composition which comprises:

- a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising [a] an altered sphingosine base comprising a C-4 carbon, to ii) Keyhole Limpet Hemocyanin comprising an ϵ -aminolysyl group;
- b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and
- c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,

wherein in the conjugate the ganglioside derivative covalently bound to Keyhole Limpet Hemocyanin by a stable amine bond between the [through a] C-4 carbon of the altered sphingosine base of the altered ceramide portion of the ganglioside derivative [to] and the nitrogen of the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin [, wherein the C-4 carbon is present in a CH_2 group], so as to thereby treat the cancer in the subject.--